



# **PWD 86 Series**

Instrument Washer Disinfectors



# Customization. Innovation. Excellence.

### **Driven by customer needs**

Steelco is a leading infection control solution provider, supplying the healthcare, laboratory research and pharma sectors. Active in over 100 countries, Steelco has equipped numerous world renowned hospitals and counts among its customers household names in the laboratory, pharmaceutical and industrial sectors.

Driven by customer feedback, Steelco develops, manufactures and supplies solutions that maximize infection control, safety, optimize processes and minimize costs. Already a leader in innovation in areas such as automation, the integration within the Miele organization has provided additional boost in technological development.

Steelco provides technical service and user training courses at the Steelco Academy as well as at customer sites.

Our optional remote diagnostics capabilities and worldwide team of factory trained engineers ensure that you receive the service support you need to cost effectively maximize the uptime of your equipment.





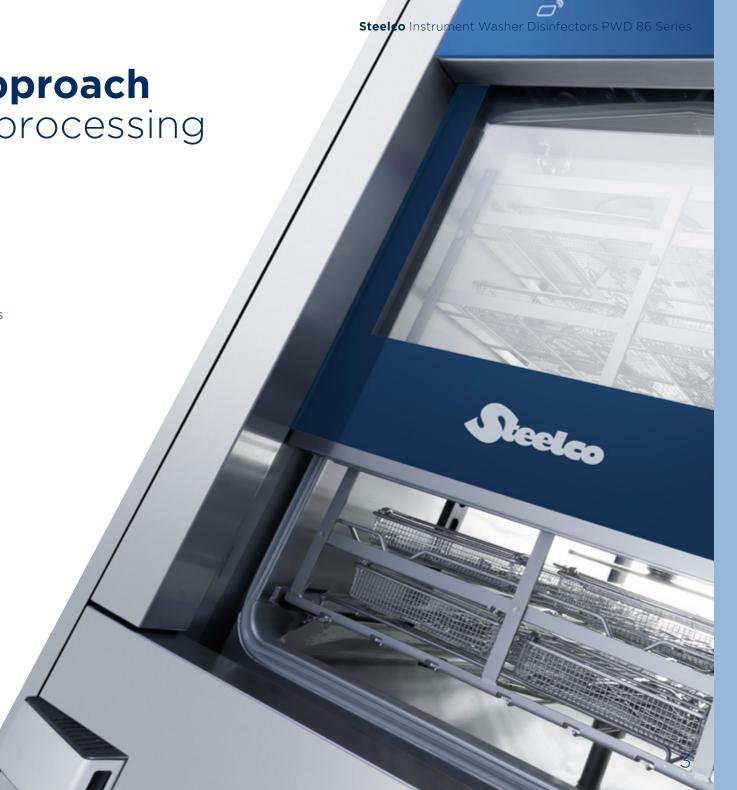


Modern surgical techniques increasingly require complex instruments. Whilst many of these can be disassembled prior to reprocessing, they not only contain lumens but also joins and other components which research has shown are hard to clean.

As a leading innovator, Steelco has developed the newly patented "Power Pulse Cleaning" technology to improve the cleaning of MIS instruments that are challenging to reprocess, thereby reducing risk and minimizing or eliminating any required manual precleaning.

### **Standard compliant**

Steelco PWD 86 Series is designed and constructed to comply with the latest guidelines: 93/42/EEC and s.m.i, EN ISO 15883-1/2, CEN ISO/TS 15883-5, EN ISO 14971, IEC EN 61010-1, IEC EN 61010-2-040, EN 61326-1, EN 62304.



# Safety & Performance coming together





**PWD 8628** 1150 mm width

**PWD 8626** 900 mm width

#### Two sizes for the optimization of CSSD

layouts available in 900 mm and 1150 mm width using the same wash racks and modules

#### Same great features and performance

modules dedicated to instruments of different surgical specialties using patented exclusive Power Pulse Cleaning technology

#### **Space saving concept**

fewer racks and modules allow you to save space in your busy CSSD and still get the perfect results you need

The increasing complexity of surgical instruments and the cleaning challenges this creates as well as the desire of customers to reduce manual pre-cleaning, were the driving force behind the research and development of Power Pulse Cleaning.



Vertical sliding up doors up to 18 DIN load capacity 351 liters chamber volume 6 levels wash carts

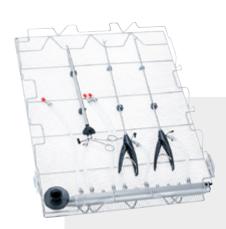


Traditionally increasing water pressure has been used to increase the water flow rate through hollow lumen instruments. However due to the physical properties of lumens, the speed of water flow is mostly increased in the middle of the lumen, whilst the soil to be removed is located on lumen walls.



Extensive research was undertaken to find the best way to overcome this challenge, with the result being the development of the exclusively available Power Pulse Cleaning technology from Steelco.

This involves the pulsing of air pressure bursts during the water flow. This generates a strong front wave that increases higher flow rates along lumen walls, and improves mechanical cleaning action on lumen walls, joins and junctions.



# Proven performance

Power Pulse Cleaning has proven its efficacy with protein analytic results type tested on complex microsurgery instruments without any prior manual pre cleaning treatment.



# Efficiency & Sustainability coming together



**The drying system** has been designed to provide optimal performance both in terms of saving process time and improve drying quality with two blowers, heating systems and HEPA filters.

HEPA filters are located immediately before the chamber so that potential particles from fan and heater elements are safely filtered out.



**Dynamic Water Loading** allows the adjustment of the water pressure and flow according to the amount and type of load and the cycle phase (clean, rinse or disinfection). Water loading is very fast and efficient as water inlets and tanks are controlled to ensure the proper temperature of water entering the chamber according to each cycle phase.



A variable speed pump system allows the adjustment of water pressure and flow according to the amount and type of load and the cycle phase (clean, rinse or disinfection).

A second pump is fully dedicated to the chamber washing arms.

#### **Optimized for everyday use**

PWD 86 series allows quick access to the high capacity chemical storage drawer with connectivity option to central dosing system

#### **Optimized for service**

Designed for easy service and validation



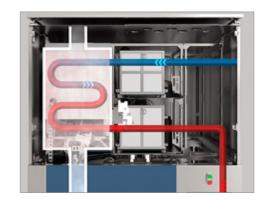


Simply well engineered. The PWD 8626 and PWD 8628 have many advanced features to improve process speed and decrease lifetime running costs.

#### **Steam condenser heat recovery**

The ECO steam condenser absorbs heat during the drying phase to pre-heat final rinse water for the following cycle. Incoming cold demineralized water passing through a heat exchanger assists to save both heating energy and up to 50% of the cooling water per cycle\*.

\* consumptions data are referred to an average cycle with 18 minutes of drying phase





PWD 86 series can be equipped with different types of built-in water tanks:



to speed up the process by

pre heating the final rinse

DI water

RECYCLING Tank to recycle the final rinse



Combi Tank

to recycle the final rinse to speed up the process water to be used in the following washing cycle to speed up the process and recycle the final rinse water

The combination of the different tank options allows you to reach the optimal configuration, as efficiently and as fast as you need (see compatibility chart - page 14).





### As fast as you need it!

#### **Cycle time**

Reduced cycle time for each load type without compromising cleaning and disinfection results whilst saving energy and water consumption.

# Flexibility & Control coming together

Modules dedicated to instruments of different surgical specialties can be easily inserted into a base wash rack. RFID scanning of the modules selects the optimal cleaning and disinfection cycle from the washer's stored program database, choosing the best program to ensure maximum cleaning and disinfection efficacy whilst reducing cycle time, water usage and energy consumption.



Patented technology exclusively available from Steelco.

#### **Ideal washing performance**

Modules dedicated to instruments of different surgical specialties and Power Pulse Cleaning module

## Optimized chemical use and reduction of water and energy consumption

Flexible Loading System management is fully integrated with the other advanced functions of the PWD 86 series such as Adaptive Speed Washing and Dynamic Water Loading giving you unmatched efficiency of the washing and disinfection processes.

#### **Space saving concept**

A few basic racks and modules will allow you to save space in your busy CSSD and get the perfect combination you need

- + 10 basic racks
- + 11 modules for injection washing
- Over 50 inserts
   and accessories



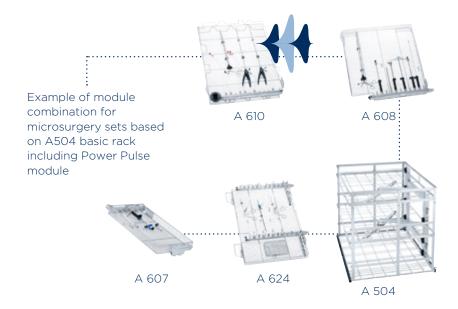
### Intelligent cycle selection

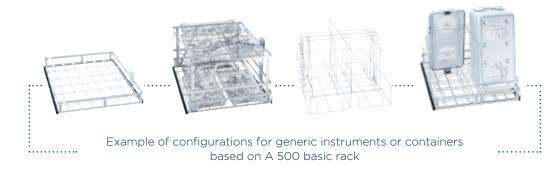
Information from the automatic RFID scanning of the composition of the washing rack after the washer door closes is transferred to the washer disinfector control panel and checked in the database of validated configurations to select the optimal cycle.

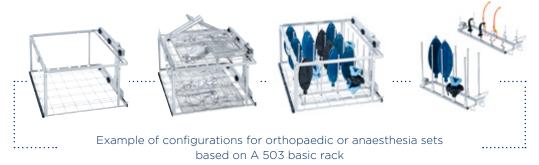


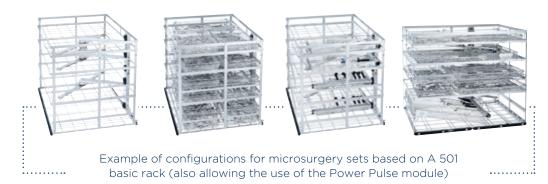
So much more than just a complete range of configurable loading options with validated solutions for various surgical specialties and robotic surgery instruments.

Easy and intuitive to use with automatic program selection assists you to achieve optimal results whilst helping you save time and energy. Steelco's way to make your busy day just a little bit easier.











#### **Attention to detail**

#### **Microfiltration on modules**

In addition to the advanced sump water filtration that eliminates the recirculation of small debris exceeding 0,2 mm, modules for eye and microsurgery hollow instruments can be equipped with a large surface, tool free removable, fine mesh filter (0,063 mm).

# Efficiency & Sustainability coming together

# **PWD 86 Series Combined Advantages**

The combination of the variable speed with a double pump system, modular load carriers and RFID recognition provides improved cleaning performance, reduced water and energy consumption to an unparalleled level, helping your CSSD to meet its sustainability goals.

#### **Load carriers Power Pulse Cleaning** Configured to the requirements of to reduce the total reprocessing time different surgical specialties with a of complex instruments normally different amount and type of modules requiring manual pre-treatment Washing pump speed Water loading maximum speed for intensive adjusted according to the cleaning action, low speed for number and complexity of less demanding action, rinse and the load carriers and washing disinfection pump speed

#### **Energy saving**

thanks to load optimized parameters, hot water recycling and steam condenser with heat recovery

#### Water recycling

with the configuration of the washer with a Recycling tank or a Combi tank for water preheating and recycling

#### **Chemistry saving**

reduced chemistry consumption is also a positive consequence of water saving

-50%

-45%

## Efficient, fast and eco friendly

PWD 8626 and PWD 8628 are super efficient, fast and eco friendly when properly combining interlinked options. Ask Steelco how you also could achieve these savings!

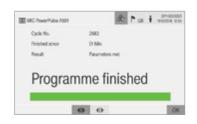
\* savings are referred to a treatment cycle on a PWD 8628 with pre heating tank, recycling tank and Power Pulse Cleaning on complex microsurgery instruments.

# **Limitless information** & User friendly coming together

#### Large HMI with user friendly graphics

7" colour touch displays are integrated in the glass front panel of the washer and installed on both loading and unloading sides.

HMI screens graphics are easy to interpret without compromising the flexibility and capabilities of the machine and process. Process monitoring is intuitive with color coded messages to quickly identify the cycle status.



#### RFID user recognition

The control system provides up to 8 user levels for daily use, programming or service activities. Users can also identify themselves by RFID cards.

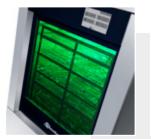
#### **RFID Automatic wash rack and** modules recognition

The washing rack composition is automatically scanned and recognized for simple and safe process operation.

#### Cycle and instrument traceability

Full history cycle traceability, compatible with SteelcoData Pro instrument traceability systems.









### Process monitoring... at a glance

#### Light in the chamber

Washer/cycle status is also easily shown by the change of color of the chamber light.

# Smart design & Reliability coming together

#### Hygenic design

The washing chamber is designed and constructed with smooth edges and corners, removing areas where soil could accumulate and lead to bacterial growth.

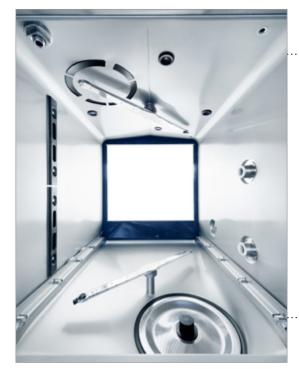
#### Robot system welding technology

Starting with highest grade stainless steel sheet, chambers are completely made by robots with maximum precision and quality.

#### **Smart sump water filtration**

The PWD 86 series sump fine filter mesh reduces the size of the debris that can recirculate to less than 0.2 mm only and eliminates the need to equip the rotating washing arms with open ends for inspection and cleaning access thereby saving time.

The collection of debris on the specially designed inclined filter surface allows self-cleaning during draining, forcing debris into the drain during each cycle drain phase, with the benefit of reduced manual filter maintenance, thereby saving time.











## Retrocompatibility

PWD 8626 and PWD 8628 are streightforward replacement for old washer disinfectors. Previous generation Miele PG 8528 washer disinfectors wash racks and transfer trolleys are also compatible with both PWD 8626 and PWD 8628.



# **Technical data**

Model name	PWD 8626	PWD 8628
Washer disinfector		
Double pass through model	•	•
Full glass doors sliding up	•	•
For installation as a single unit or in barrier	•	•
Width [mm]	900	1150
Depth [mm]	990	990
Height [mm]	2500	2500
Chamber		
Material	1.4404/316L	1.4404/316L
Useable chamber width [mm]	650	650
Useable chamber depth [mm]	800	800
Useable chamber height [mm]	675	675
Chamber volume [I]	351	351
Load capacity		
Max. number of DIN 1/1 mesh trays	18	18
Max. number of loading levels	6	6
Process		
Flexible Loading System - automatic RFID scanning of wash cart and modules	•	•
Power Pulse Cleaning	0	0
Dynamic Water Loading	•	•
Adaptive pump pressure	•	•
Steam condenser	٥	0
Steam condenser heat recovery	٥	0
Heating system		
Electrical heating system	•	•
Electrical/steam heating system	0	0

## **Loading solutions**

A full range of transfer trolleys, infeed and outfeed conveyors and rack return hatches or windows is available to be combined and match your perfect workflow layout.



lodel name	PWD 8626	PWD 8628
Advanced ECO options		
H - Heated tank / Pre-heating tank	-	0
RT - Recycling tank	-	0
T - Combi tank	0	-
Chemical dosing		
Chemical dosing pumps included as standard [No.]	2	2
Chemical dosing pumps available as option [No.]	4	4
Chemical canisters capacity [No. x I]	4x5 or 2x5 + 1x10	4x10
Process monitoring		
pray arm rotation monitoring	•	•
Conductivity sensor	•	•
Prying and ventilation		
ilectrically heated forced air drying - HEPA H14 filtered	0	0
iteam condenser	0	0
iteam condenser with heat recovery	0	0
Control system and traceability		
ouch screen graphic LCD display on loading and unloading side	7"	7"
ntegrated printer	0	0
thernet port for network communication	•	•
color chamber light according to machine status	•	•
ervice access		
ront access for service, no maintenance corridor	•	•
oading accessories/automations		
oad transfer trolley	0	0
oading/unloading automation	0	0

<sup>• =</sup> Standard • = Optional - = Not available

### **Service**

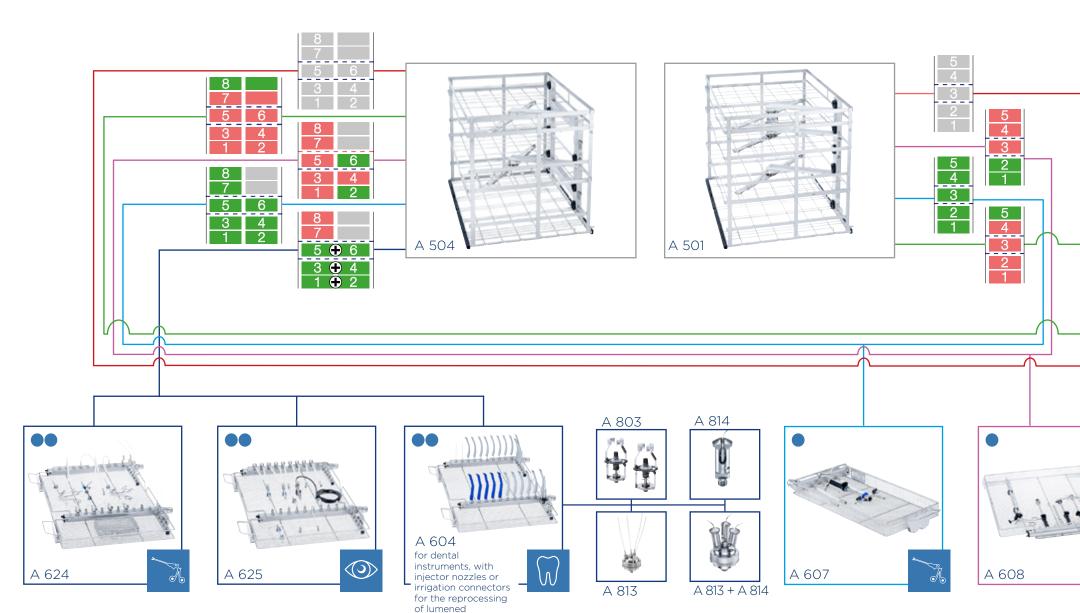
Wherever you are located, a factory trained and experienced service team ensures efficient installation, commissioning, technical support.



## **Steelco PWD 86**

Basic racks & specialized washing modules

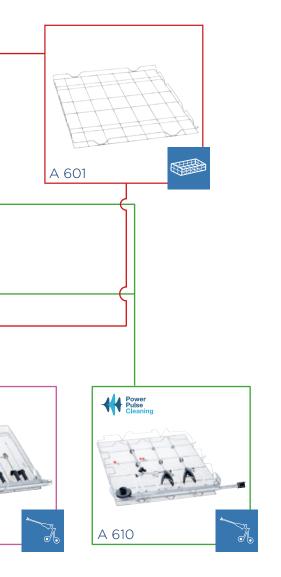


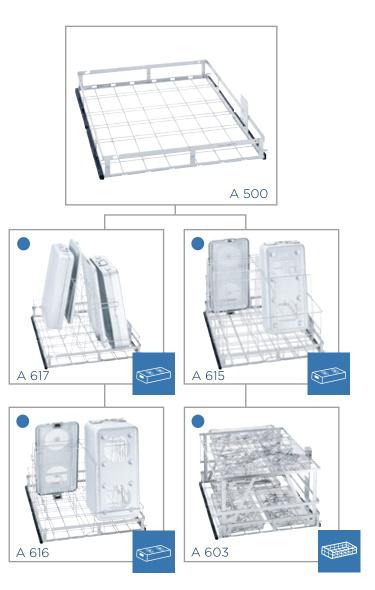


instruments.

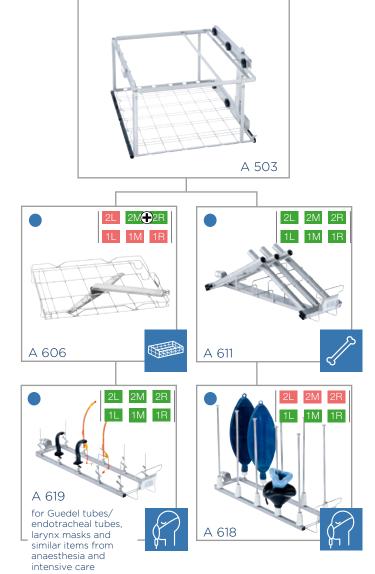
Specialized modules for Steelco PWD 86 are the core of the "Flexible Loading System" allowing ideal washing performances, optimizing chemical use and reducing water and energy cycle consumption.

Here shown the compatibility rules of modules on 4 basic wash rack. (due to the height of the load, some positions are possible but not simultaneously)









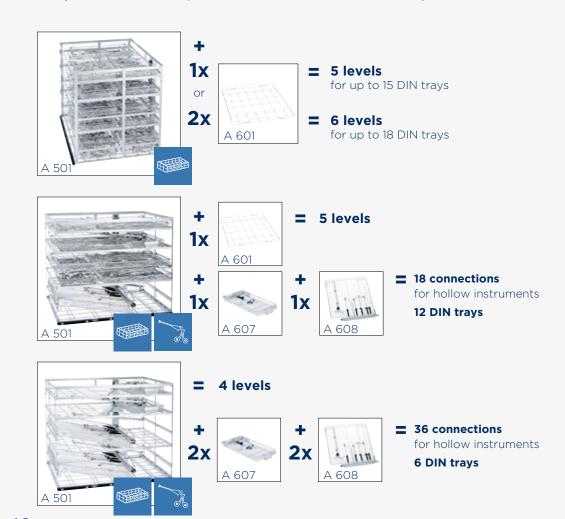
### Flexible Loading System compositions

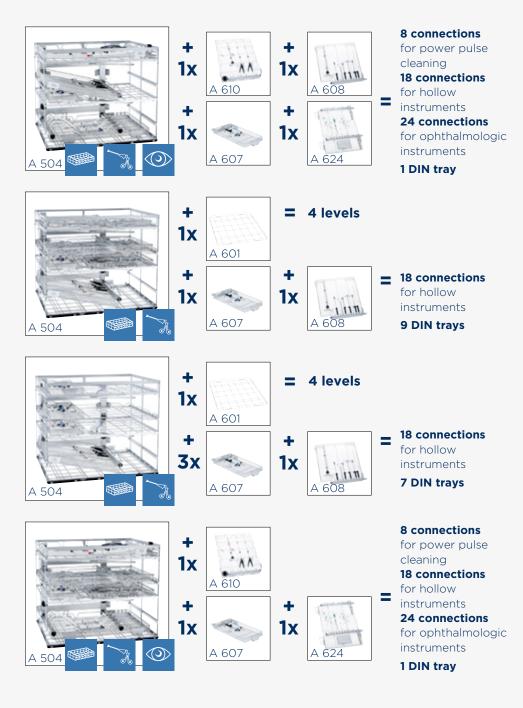
# combining basic racks & specialized washing modules

The compositions here represented are identified by the RFID control system of the PWD 86 series instrument washer disinfector and allowed being factory type tested by Steelco.

Pictures may represent empty space available for additional mash trays not requiring injection washing connections. Connections capacity may vary if washing modules are equipped with optional instrument connections.

Always refer to wash carts, modules and connections IFU's for an up to date information.







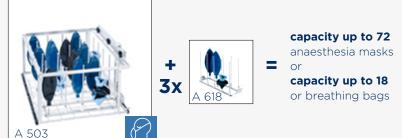




tube-shaft instruments from the field of orthopaedic surgery: rinsing tubes, working shafts, guide sleeves, bone marrow drills...

up to 5 DIN trays

up to 12 connections

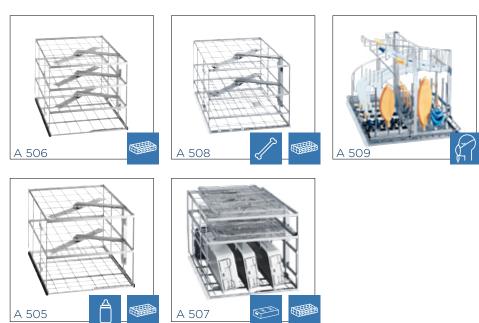




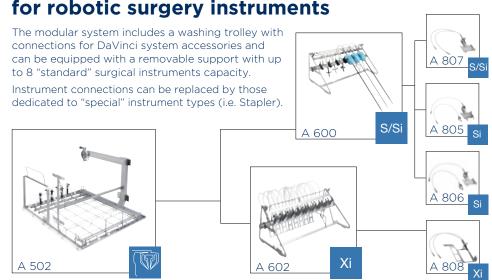


 capacity up to 60
 Guedel tubes/endotracheal tubes, larynx masks and similar items from anaesthesia and intensive care

### **Preconfigured washing Racks**



Washing racks for robotic surgery instruments









# Customization. Innovation. Excellence.

#### **STEELCO - Miele Group Member**

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